

ABSTRACT

The invention relates to a iron material with graphite flakes, which in a simple manner allows the respective optimal properties to be adjusted for a wide product range by varying the contents of the respective alloy components. For this purpose, cast iron material according to the invention comprises (in % by weight) 3.4 to 4.1% C, 0.9 to 1.4% Si, 0.4 to 0.7% Mn, 0.4 to 0.6% Cu, 0.01 to 0.04% S, 0.003 to 0.007% O₂, ≤0.04% P and iron and unavoidable impurities as the remainder. In addition, the following may optionally be included singly or in combination 0.15 to 0.45% Mo, 0.005 to 0.02% La, 0.0005 to 0.01% Sr, 0.05 to 0.8% Ni, 0.005 to 0.1% V, 0.05 to 0.15% Sn, 0.05 to 0.08% N and 0.01 to 0.02% Ce. In this case $0.85\% \leq S_c \leq 1.05\%$ applies to the degree of saturation $S_c = C\%/4.26 - 0.3 * (Si\% + P\%)$, and $1.97\% \leq MEG \leq 2.07\%$ applies to the respective quantity $\%MEG = 2.25\% - 0.2 Si\%$.

Publication shall take place without figures.